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Greetings

The first internet site devoted to cetacean issues was developed in the mid-1980s by a Finnish nuclear physicist named Rauno Lauhakangas, working at the CERN nuclear reactor in Geneva Switzerland. The World Wide Web was just then being developed by a group of computer engineers housed in a building adjacent to Rauno's lab at CERN. Returning to Helsinki, Rauno asked his twelve year old son, Ilmari, for some ideas about how this brand new global networking medium might be best used. Ilmari answered that the Internet seemed a great opportunity to spread information about the intelligence and beauty of cetaceans. When Rauno next visited CERN, he designed the Whale Watching Web under the poetic rubric that

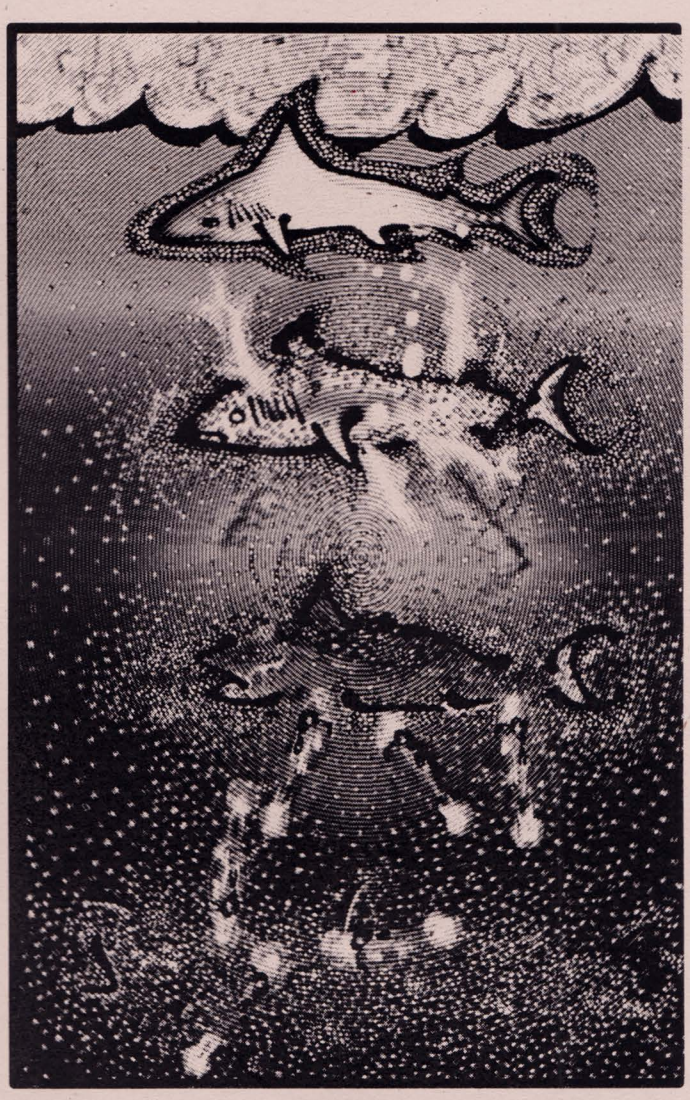
"Wherever whale watching flourishes, whaling must wither."

The site thrives today, mostly in its original, somewhat quaint text format, and with minimal upkeep from its web manager, Rauno. If anything has altered from the original interface, it is the sheer number of awards that the site has garnered over the years, and which can be seen at the bottom of the home page. Hundreds of accumulated links verify the incredible global reach of whale tourism, whale activism, whale science and whale art from over 50 countries. Take a look at the Whale Watching Web at:

http://www.physics.helsinki.fi/whale/

Interspecies first became involved in the Whale watching Web in 1991, when Rauno contacted me about writing a new page about interspecies communication. At that time, like most people, I had never heard of the World Wide Web or even the Internet, per se, although I was starting to use email as an alternative mode of business correspondence.

A year later, Rauno invited me to do a concert in Helsinki while I was in Europe on a performance tour. Our meeting was one of the fortuitous encounters of my life, and has led directly to Interspecies' ongoing research in northwest Russia with beluga whales and the ancient



petroglyphs that depict shamanic musical communication with these same whales.

Our Name and Our Status

In 2000, Interspecies board of directors gave Rauno limited access to our name and non-profit status, in whatever capacity our corporate umbrella might aid his own cetacean activities, both on the water and over

Internet. Later that year, he and I began an active collaboration, pitching a film treatment I had written about the beluga whales and their connection to the shamanic petroglyphs of Karelian Russia. A production company soon came onboard, consisting of a Canadian director and Finnish producer, Marko Rohr. The film was shot on the White Sea during the summer of 2001.

Unfortunately, during the two week shooting period, I became disenchanted watching the director crudely alter my original treatment while mistreating her Russian support team. By the last day, both the chief cinematographer and I had quit the film. Nonetheless, it was released in 2003 as "Belugas Across Time".

The finished film focuses primarily on a political comparison of the White Sea beluga situation with a somewhat parallel situation of Inuit hunting belugas in northern Canada. There is very little in the film about beluga communication, except as filtered through the dim lens of mainstream science. Rauno is interviewed but briefly, and his profound involvement with the whales is only recounted in passing.

Nonetheless, I returned home from Russia bearing an outright treasure, a meter-tall crayon rubbing of a petroglyph, often discussed but almost never seen, that depicts a shaman giving birth to a beluga whale while cartoon balloons strongly suggest that the whale and the woman are singing to one another. Sadly, my rubbing may be the last print ever to be made of this exceedingly famous, but badly-eroded image. You can examine a graphic of this image on page eight.

That fall, Rauno contacted the European Union, in an effort to get Government to recognize and protect the White Sea beluga whales. He made the good case that these whales were very likely the last surviving population of the species in all of Europe. Rauno was eventually awarded an EU grant to develop a shore whale watching facility, a nature trail, and housing for visiting whale researchers.

The next summer, 2002, he and I returned to the White Sea, where we chartered a local sailboat, and anchored it for eight days in prime beluga habitat. We collaborated closely with Russian biologists from Moscow's Shirshov Institute, delving into the complex nature of beluga whale communication.

That summer's animated discussions between the Finnish particle physicist, the American whale artist, and a brilliant young Russian acoustician, led to the provocative concept of a "vertical whale language"— information encoded primarily within the vertical frequency spectrum, rather than in phonemes or within the horizontal axis of time — that has been reported in several recent Interspecies Newsletters.

Our Community

The Whale and Dolphin Conservation Society, (WDCS), is a grant-giving organization based in London. WDCS has some history with Interspecies. In summer 2003, when Interspecies instigated an underwater concert in Berlin performed by European techno DJs playing whale sounds to an audience of representatives of the International Whaling Commission (IWC) floating in a body-temperature swimming pool, WDCS, was our main sponsor. A year earlier, when I attended the IWC's annual meeting in Japan as a non-voting delegate, WDCS was my sponsor. When Rauno and I conducted a Cachalot fact-finding mission to the Azores in 2003, WDCS American rep, Courtney Vail, joined us on location.

In early 2004, WDCS gave Rauno a grant to further the cause of Beluga whale preservation in northern Europe. By that time, almost entirely through Rauno's tireless volunteer effort, the White Sea beluga population had finally been awarded a measure of protected status by the European Union. This designation was granted after the EU's environmental ministry acknowledged what Rauno had speculated: that the White Sea

population was the only known beluga residency within Europe in modern times.

However, the beluga is a migratory species. This behavior prompted Rauno to wonder if a relict population might spend at least part of the year somewhere along the remote Arctic coast of Scandinavia.

Human Profile

Rauno used some of the WDCS grant to subsidize two Finnish whale researchers to sail up along the north coast of Norway and Finland searching for undocumented beluga activity. The expedition left port in July 2004.

The leader of the expedition was Hernan Patino, a Colombian expatriate living in Helsinki. Hernan is an award-winning photographer of underwater wildlife. He has worked closely with Interspecies from the very start of our Finnish/Russian program, offering his notable skills to document our growing program.

From an interspecies perspective, Hernan played an unexpected role in helping me understand better how the White Sea belugas relate to human beings. When Rauno and I were spending our 8 days on the sailboat, I was never able to attract the whales to the boat for more than a few moments at a time. Although the whales sometimes vocalized with my musical offerings, it was clear that these White Sea belugas did not reflect the same level of enthusiasm for human interaction that I have encountered with other cetacean species around the world.

Yet every time Hernan donned his dry suit to shoot these same whales underwater, they flocked to him, until he was surrounded by individuals who sometimes peered deep into his eyes through the face mask. The resultant underwater photos are stunning to behold.

Observing Hernan's success, I recognized that my own behavioral profile was of a human on a boat deck holding a guitar, which closely approximated a human on a boat deck holding a rifle. In fact, these White Sea whales had been shot at by fisherman, hunters, and military for hundreds of years, resulting in a pronounced wariness to any human being on a boat.

Yet underwater, in their own element, they displayed an exceedingly friendly behavior towards humans. All of us on site agreed that the future of any interspecies relationship with these whales, must be initiated within the whale's realm, at least until we are able to demonstrate that humans on boats are no longer a threat to their very survival.

Hernan's expedition to Arctic Scandinavia hit the jackpot. In a remote Norwegian fiord, he discovered a formerly undocumented group of about 1500 belugas.

At this early juncture, it is impossible to tell if the whales are resident to the area, or whether they migrate here from somewhere else. What does seem clear, is that this vast pod of belugas has not been impacted by human hunters in a very long time.

First Contact

Hearing the news of Hernan's discovery prompted me, this fall, to resurrect my original film treatment about interspecies communication with beluga whales. I rewrote it with a fresh title, *First Contact*, and sent it off to Rauno, Hernan, and Marko in Helsinki.

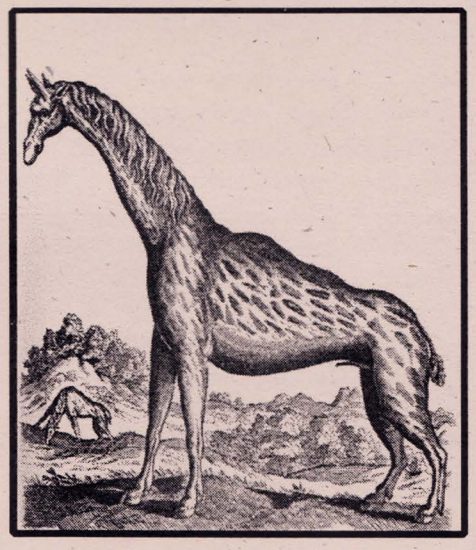
This new film would include my original filmic themes of beluga language, culture, and interspecies contact. But it will unfold through the documentation of a real expedition attempting a first contact with these whales.

This is an exciting prospect since, conceivably, these belugas have not experienced human contact in many years, if ever. If that is true, then this group is almost certainly the largest population of beluga whales on Earth, not victimized by human hunting.

Muktuk or Wisdom

Think about it. Beluga whales may be the closest thing we have on planet Earth of an extraterrestrial intelligence. And yet, today, the primary interaction our species has with these beings, is to kill them and then dine on their fat layer as a kind of Inuit "candy" called *Muktuk*. An alternative is to capture them, isolate them from social interaction, and hold them until death in glass-enclosed viewing pools.

Belugas are declining everywhere in their range, still hunted, and now, increasingly at risk from chemical pollution. Yet the possibility of a true beluga language is quite real, and their friendliness towards humans, on their terms, is well documented. This newly discovered pod presents our species with a bright opportunity to get it right, at least this once.



But what does contact actually mean? Perhaps, it means to hand pick a small group of human ambassadors, communicators, artists, ceremonialists, scientists; and present each of them with the question of how our species might greet these whales from a place of humility and equality. This greeting, nothing beyond that, is the clear theme of *First Contact*. It will be the film crew's job to stay out of the way *and* catch it on film.

At this early juncture, my three Finnish colleagues have expressed enthusiasm about the possibility of producing such a film. Meetings are being set up in Helsinki for this Spring. The concept is now being shared with potential sponsors, and — how shall I say it? — potential "greeters". Keep tuned. And try to imagine how you might greet a group of 1500 belugas?

The Unknown Whale

MSNBC: LONDON Nov 8, 2005- A lone whale, with a voice unlike any other, has been wandering the Pacific for the past 12 years, American marine biologists said Wednesday. Using signals recorded by the U.S. Navy to track submarines, they traced the movement of whales in the Northern Pacific and found that a lone whale singing at a frequency of around 52 hertz has cruised the ocean since 1992. Its calls, despite being clearly those of a baleen, do not match those of any known species of whale, which usually call at frequencies of 15 to 20 hertz.

The mammal does not follow the migration patterns of any other species either, according to team leader Mary Anne Daher. The calls of the whale, which roams the ocean every autumn and winter, have deepened slightly as a result of aging, but are still recognizable. The study, by scientists

at the Woods Hole Oceanographic Institution in Massachusetts, was published in the December issue of the journal Deep-Sea Research and was reported in the New Scientist magazine.

You can listen to a recording of these whales for yourself at:

http://www.pmel.noaa.gov/vents/acoustics/whales/sounds/sounds_52blue.html

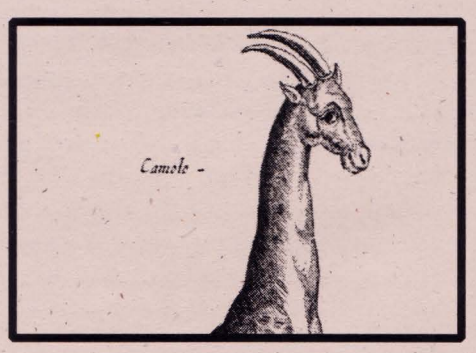
Commentary:

As might be expected, this recent news item has provoked a lively email discussion among whale acousticians. First of all, if the recordings were made by prowling submarines, but without ever making visual or radar contact, how in the world can anyone, let alone a scientist, conclude that a sound heard over a twelve year span, is made by a solo whale. The fact that the sound has admittedly changed, makes the Navy's conclusion even less viable. As one correspondent has written: there is not enough evidence to conclude that there are not 10,000 whales out there.

Unfortunately, the Navy scientists have not yet solicited Interspecies consultant Mark Fischer to do a wavelet analysis of the calls. Mark reports that, so far, only a single recording has been made available for public listening. Even if the Navy or NOAA has other recordings, they are denying him access despite his requests. Mark and a few others are now considering demanding this access via the Freedom of Information Act. Mark wants to know why these agencies would conceivably deny a fair listening to any tax paying whale acoustician.

A more accurate identification of these whales would result if the navy let Mark analyze the recordings they have hidden away. Wavelet technology has already proven itself to be a viable method for identifying whale species, and the technique was essentially invented by Mark. Wavelets display underlying patterns within whale calls that can not be seen in spectrography. These patterns are distinctive enough to give researchers an accurate method for identifying vocalizing species. After analyzing the single 40 second recording made available for public listening at the NOAA site, Mark has commented that the inherent patterns are identical to known patterns within blue whale calls. The only real difference is the displayed frequency.

Another whale acoustician has read Mark's analysis, and concluded that the animal might just as easily be a blue whale with a damaged sound-making organ (essentially the blowhole). Who can say for certain that blue whales don't occasionally sing falsetto?



Russia's Whale Quota

Pertinent to this newsletter's story about Interspecies' Finnish connection, the Russian Republic has just published its 2005 domestic quotas for the capture and killing of cetaceans. These include:

- 6 killer whales
- 1270 belugas
- 5 bottlenose dolphins
- 5 pilot whales
- 10 pacific white-sided dolphins

You can read more about these quotas at:

http://www.2mn.org/engl/documents/rprf1482-r_en.htm

Orca Vocal Behavior

Deecke, V. B., Slater, P. J. B. & Ford, J. K. B. 2005. The vocal behavior of mammal-eating killer whales (Orcinus orca): Communicating with costly calls. Published in Animal Behavior, doi:10.1016/j.anbehav.2004.04.014.

An Abstract

The cost of vocal behavior is usually expressed in energetic terms; however, many animals pay additional costs arising from predators or potential prey eavesdropping on their vocal communication. The northeastern Pacific is home to two distinct ecotypes of killer whales (Orcinus orca): resident killer whales feed on fish, a prey with poor hearing abilities, whereas transient killer whales hunt marine mammals, which have sensitive underwater hearing at the frequencies of killer whale vocal communication.

In this study, we investigated how the superior hearing ability of their prey has shaped the vocal behavior of the transient ecotype. We recorded pulsed calls and the associated behavioral context of groups of transient and resident killer whales in British Columbia and southeastern Alaska. Transient killer whales emitted pulsed calls significantly less frequently than residents.

Transient killer whales only exhibited significant amounts of vocal behavior after a marine mammal kill or when the whales where displaying surface-active behavior. Vocal activity of transients increased after a successful

attack on a marine mammal.

Since marine mammals are able to detect killer whale pulsed calls and respond with anti-predator behavior, the reduced vocal activity of transients is probably due to a greater cost for calling in this ecotype resulting from eavesdropping by potential prey.

The increase in vocal behavior after a successful attack may represent food calling (informing other animals in the area about the presence of food), but is more likely to reflect an increase in social interactions during feeding and/or the fact that the cost for vocal behavior is comparatively low after a successful attack.

Our Last Newsletter?

No, this is not the last issue of the Interspecies Newsletter. It is, however, an indicator that we are seriously thinking about it. If we do stop printing, the last issue will be the summer 2005, which means you will receive two more after this one.

Hopefully you, my readers, will take a moment to email me (beluga@interspecies.com), to offer some feedback about whether this printed newsletter is still relevant to you. If somebody wants to really knock my socks off, give Interspecies a grant to hire a membership coordinator/newsletter publisher.

Permit a brief historical memoir to show you how dear this newsletter is to me. I began Interspecies in 1978, when a lawyer friend assured me that my work with art and whales would be far more likely to flourish if it was nurtured under a nonprofit umbrella. When I agreed, he went ahead and set the whole thing up for me. For that career-nurturing assistance, I thank Jack Siedman of Bolinas California.

I didn't know anything about administering a nonprofit. But I did know that the non profits I admired most, had developed a membership via a regular newsletter. It was a natural step for this writer to start up a newsletter.

The first issue was published in the fall of 1978, and contained a story, as well as a few photos about Interspecies work to stop the killing of dolphins at Iki Island Japan, funded by Greenpeace, the Animal Welfare Institute, and various individuals. It was printed on a single legal-size piece of yellow paper. The volunteer editor was Susanna Scanlon whom, unfortunately, I lost contact with long ago.

The newsletter was an on-again/off-again affair until I moved to San Juan Island in 1983. Prior to that move, I had written a cover story for a well-known magazine about a dolphin oceanarium trainer from New Zealand named Frank Robson, who explained in some detail his method of training dolphins mind-to-mind, with no visual cues or food rewards. The magazine added my address to the bottom of the interview, and I was soon flabbergasted to receive over five hundred letters from people all across the USA, asking for more info about interspecies communication. Suddenly we had a mailing list for the newsletter. At that point, Sandra Wilson, took over the dual roles of publisher and membership coordinator. By 1986, we had almost a thousand subscribers. Publishing the newsletter on a quarterly basis became a huge volunteer task for several volunteers.

When Sandra left, I felt somewhat stuck for a few years with the job of essentially being **Mr. Interspecies,** a role that included administrator, newsletter publisher, principal investigator, fund raiser, and membership coordinator. Naturally, as my writing and whale work became more intense, these corporate tasks got the short shrift.

Ironically, as our subscriptions slowly but surely took a nose-dive, I thrived as the principal newsletter writer and editor. I simply had to come up with a new piece of writing about interspecies activities and philosophy four times a year. All through the late 1980's and 1990's, that writing functioned as the foundation upon which my five books were based.

Two societal issues have changed my love affair with the printed newsletter. First is the growing price of simply publishing it. Just ten years ago, when it was made on a printing press, I considered the newsletter a thing of rare beauty. Photocopy duplication made the finished product far less beautiful, but it was the only cost-effective way to continue. Rising post office costs have finally made it impossible for us to send out many free copies.

Over the past two years I have struggled mightily with a decision to fund raise specifically to hire a person to take over Interspecies' publishing and membership tasks. But these are hard times for non profits, and I am barely surviving myself on a stipend I receive from Interspecies to keep running the field projects and the media outreach, so I can't quite muster the enthusiasm to attempt to essentially double our annual budget. I just don't see it being successful.

If the first change has led to discouragement, then the second change—the growth of the Internet—is absolutely positive. My job at Interspecies already includes a few hours every morning responding to emails from the most incredible network of global correspondents. And our web site is thing of rare

beauty to me. The real possibility of adding a talented volunteer to help us add streaming audio and video to interspecies.com, means that we will soon tap the potential of a terrific new form to demonstrate our multimedia work in the world.

I have recently started publishing an online alternative to the published newsletter, called "The Occasional Interspecies Newsletter".

Putting together the Occasional Newsletter takes about the same amount of attention as the printed edition. But utilizing my email address book, I already have six times as many readers as receive the printed issue. And whereas the online version takes no time or money to distribute, the printed version takes as much time to send as to write.

A few other issues are worth mentioning. Having to retain mastery of both print and internet software boggles my mind. I don't expect most of you to take the time to type into your browser the internet addresses displayed in this printed edition. But when I report the same info online, a reader simply clicks the link to get the whole story.

In conclusion, the Online Newsletter and Interspecies.com need *more* of my attention if this organization is to remain viable. But I don't have the time to:

1) develop an online newsletter
2) keep publishing a subscription newsletter
3) keep updating our web site

Over the next six months, I plan to expand the Online Newsletter, sending it out perhaps once a month. Doing that, I simultaneously create the content for a WebLog to eventually be posted weekly on our web site. Advisors tell me that updating the web site, *at least weekly*, is the only way to keep visitors coming to a web site. I agree.

So please help me make the transition by signing up for the Occasional Interspecies newsletter online. How? Just send your email address to beluga@interspecies.com. I don't want lose contact with you.

Otherwise, unless a miracle happens over the next six months, the end of the print version of our story is soon coming to an end.

—Jim Nollman,
December 19, 04

The Value of Wild Places

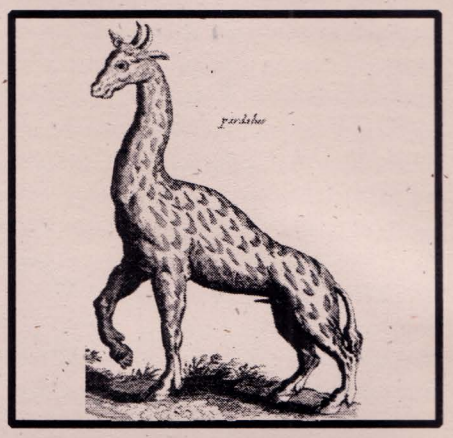
I consider Evelyn Adam's to be among the most thoughtful essayists in the United States. Yet her sole book, Wild Talk, remains self-published, and her essays remain mostly unknown outside of western Washington where she has been writing a column for the local Anacortes newspaper for many years.

By Evelyn Adams

I've been watching with interest the less-than-overwhelming response to my local newspaper's call for comments on a vision for our town, Anacortes Washington, in the year 2010. What I had thought would be a flood of letters was merely a trickle, and the lack of input leaves me puzzled.

Perhaps many simply feel numbed by this bogeyman "growth" we are called on to control. Do your eyes glaze over as mine do at those shopworn phrases: "Growth is inevitable." "We can't stop growth, but we can manage it." Well, we can "manage" cancer, too, but in the end it will still kill us.

Numerous growth-related questions face us today: should there be a golf course here, a huge subdivision there, a rezone of land to site another marina, market, etc? How do we configure the Growth Management Act? Should we ban gas engines on Heart Lake? Put a west end access road through the Anacortes Community Forestlands? A



store on Guemes Island? Fund forest management by sacrificing trees to a quarry? Designate surrounding waters a marine sanctuary? Many of these issues are concerned with the alteration of natural areas in return for some sort of pay-off. It seems appropriate here to focus on what values wild places hold for us so that we can be quite clear about what is being lost or gained by our decisions about their use.

Those who walk regularly in the woods, fields, or along the shore seldom question or identify why these places are necessary to people. But when one is away from like-minded folks and about to parry with those who don't take certain premises as a given (after all, many enjoy living in congested areas and want their pastoral contact limited to post cards, thank you), it's necessary to dig deeper. We can't defend what we want without fully understanding what we need. We can't render wise, consistent decisions, without a value base from which to work.

Home, job, recreation – these are tangible values easily identified. Too often the benefits we ascribe to saving space and beauty are subjective and leave us wide open to charges of "sentimentality" and "impracticality." We cannot say simply that we must save land because it is lovely to look at. Why do we need open spaces and wild places? Why do I feel good walking through a forest?

My mother used to live in a Seattle neighborhood that backs up

against a field. Used to be she could sit with her morning oatmeal and look out at nothing but grass and a hill of firs. The view was an illusion because the field slopes down to a road and another neighborhood before the hillside rises, but no matter – she wasn't bent on physical exploration, just a little soul-wandering. But the neighborhood on the slope was speedily developed with out-sized homes that destroyed the illusion of solitude. I used to think it odd how much this bothered my city-born and bred mother until I reflected on the peacefulness of letting one's eyes rest on a scene remote from one's usual experience, and the tedious familiarity of roof lines.

We need to identify those intangible values that have as much worth as material ones, and satisfy fully as many needs. Naturalist Joseph W. Krutch writes that "Those who would cut the timber, slaughter the animals as game, turn cattle loose to graze, flood the area with dams, or even open up to subdivision are fond of saying, 'After all, human needs come first.' But of what needs and of what human beings are we thinking? Of the material needs (or rather profits) of a few…or of the mental and physical health, the education and spiritual experiences, or a whole population? We do not tear down a high school because the building industry can prove that it could profitably erect an apartment house on the site… We say, instead, that education pays off in a different way and that the space occupied by schools is not wasted. Much the same thing we say also of the space taken up by the green of a city square."

Or the space taken up by a field, a shoreline, a wetland, a forest, an empty lot. Many of us can't journey into the wilderness or even into the ACFL, but bits and pieces of wildness scattered here and there can serve as relief, a place to regain perspective, and a healthy reminder that we didn't compose the score, we're just voices in the chorus. The survival of wild places is intimately connected to our own as sane creatures and wise caretakers of our island community.

As to that inevitability called growth – must it be defined only in terms of numbers and size? (When the lifeboat's about to sink, do you invite more people aboard?) Certainly, life is growth, but can't we grow instead in kindness, respect for each other and our wild neighbors, in our care for our children, the elderly, and the land? Yes, by all means let's grow. Let's grow in our understanding of what we need to live as complete people. Let's grow in our ability to identify those values we mustn't lose. Finally, let's grow in our commitment to safeguard those values.

"Where there is no vision, the people perish." (Proverbs 29:18) As we watch wildlife become displaced and favorite spots burnt down, fenced off or paved over, more and more of us are questioning how to hang onto Wallace Stegner's "geography of hope." One step is to imagine the Anacortes you want to see in 15 years and write those letters, go to those public meetings. Above all, don't let your opponents label you as anti-human; align yourself squarely with your own species. Know exactly what it is you're fighting for. It's more than trees and space and animals and habitat – it's also the human spirit.

Fat for Sound

"Fat is good!" exclaims Heather Koopman in her lab at the University of North Carolina, examining how fats help whales hear through their jaws.

Using fat scraped from the jaws of stranded beaked whales, Koopman analyzes the length of molecules. She pulls a picture of a strap-toothed whale onto her computer screen. It is an odd species, with two teeth that grow outside the jaw until they meet, preventing adults from opening their mouths more than an inch-and-a-half. They eat by slurping in squid with suction.

Koopman is studying fats along the lower jaw, from the snout to the ear. "This bone on the outside is really thin," she says. "The ear bones sit here, next to a pocket of fat. The general theory is that sound hits the head, and gets sent through the fat in some fashion directly to the inner ear."

Koopman has developed a set of instructions for removing jaw fats from stranded animals and has distributed it to stranding teams along the East Coast. She cross-sections the samples she receives, and takes up to 150 slices for chemical analysis. What she has found is that one sample can contain many different kinds of fats, with the shortest molecules being right around the ears.

Koopman can analyze long fatty acids and see what fish a seal ate, because the food one eats provides the fats in the body. But the fat found in the head of a toothed whale is different, completely "built" by the body. Nothing comes from the diet.

These fats are unusual in two more ways: They are shorter than normal, and they branch at the end. Most fat molecules have 16 or more carbon atoms, arranged in a straight line. Dolphins have five-carbon molecules. In humans, such a short molecule of fat can be fatal. A genetic disease called isovaleric acidemia causes the body to accumulate five-carbon molecules that are made by breaking down an essential amino acid in food. But dolphins, create the same molecule without food, and can't live without it. In the dolphin jaw, these fats are sound receivers. Beaked whales have 12-carbon molecules of fat. No other known organism produces 12-carbon molecule.

Sound travels through fat in relation to the size of the carbon string. It goes faster in longer chains. When sound moves through a whale's jaw, it encounters the longer chains first, then bends in toward a channel of short molecules that leads straight to the ears. The unusual jaw fats imply that beaked whales process sound differently than any other animal. It may possess an innate spatiality. And